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SATURDAY, OCTOBER 15, 1836.

To obtain Onion Seed.

The best time to set out onions for seed is about the middle of October. This is preferable to planting them in the spring, as the bulbs will have time to throw out fibers and become well rooted; and they will produce more full and certain crops of seed, than if deferred till the latter period.

Roots of a suitable size, and the hardest and best shaped, should be selected, and when different varieties are to be raised, the roots of each variety should be planted remote from the others, in order to preclude any danger of their becoming mixed.

The ground should be light, rich, and well dug, and the onions should be planted in drills about one foot apart, and from six to nine inches asunder in the drills. The drills should be dug about five inches deep, the bulbs placed evenly in the bottom, and then covered at least three inches above their crowns with earth. It will be most convenient to make the drills by a line stretched over the ground, and to complete one before another is commenced.

The plants will appear above ground early in spring, and in the early part of summer will have attained their full height. In order to support the stalks, and prevent the weight of newly formed seed from breaking them down, stakes should be driven, in all the drills, at distances of a few feet in each, and pack-thread, or small pieces of bass matting, run in double lines along the row of stakes, passing on each side of the stems, a little below the heads; these double lines may be connected at intervals by short pieces tied across.

When the seed are ripe, the heads are cut off, spread thinly over cloths or newspapers to become thoroughly dry, and afterwards shelled out by rubbing, cleaned, and preserved.

Division of Farms.

In dividing farms into fields, whatever may the size or shape of the enclosures, great attention should constantly be had to the convenience of water, the position of the ground for drawing off crops, drawing on manures, distances to pasture, &c. the purposes of draining, and bringing together, as much as practicable, lands of similar quality, or such as can be cultivated and sown under similar circumstances; although attention to these particulars may tend to render the fields unequal in [illegible] and irregular in shape. As partition fences are always expensive, attention should also be given at the same time to enclosing the fields with the least length of fence; if it were practicable, this would be best effected by dividing the farm into equal and regular six sided figures; but as this can rarely if ever be done, it will be proper, where other circumstances will admit, that they approach as near the form of a square, as possible.

The Knowledge of Insects.

The study of the science of Entomology with a view of becoming acquainted with destructive insects, it is well known has hitherto been little attended to. We are aware that much has been done by some intelli[illegible]tivators in investigating their habits, but a great loss has been sustained by not bringing the *science* to bear upon their inquiries. Doubtless the chief reason of this neglect is, that its importance is not sufficiently seen and appreciated.

It is hardly necessary to go much into detail to prove that insects do a great deal of harm; the losses to the farmer and gardener are too frequent and extensive to admit of much doubt on this point. The wheat crop is destroyed by the Hessian fly, and the wheat insect or grain worm; Indian corn is cut off by the grub and wire worm; turneps are destroyed by a small fly or beetle; peas are eaten by the pea bug; fruit trees are stripped of their leaves by the orchard caterpillar, or killed at the trunk or roots by the borer; or the crop of fruit is cut off by the curculio; and a host of other depredators are almost unceasingly at work lessening or wholly destroying the crops of the cultivator. Besides this, the rapidity of the increase of this multitude of enemies, renders them still more formidable. Insects multiply in numbers by their offspring to an extent which far surpasses any thing of the kind in larger animals. The miller or moth from the common orchard caterpillar lays several hundred eggs at a time, and this is also the case with a large number of others; and many produce several generations in a season, such for instance as the plant lice, one of which, as was ascertained by Reaumur, may produce 5,904,900,000 descendants during its life. The white ant, which, in the warmer parts of America, destroys whole buildings, lays sixty eggs in a minute, or at the rate of 86,000 a day.

Now, in order to know how to contend successfully with these legions of enemies, we must become acquainted with their habits, we must watch them through all their changes, and understand the manner in which the mischief is committed. With some previous knowledge of the science of Entomology, we may commence this inquiry with incomparably greater advantage, than we could were we to do it with the whole field unmarked or unknown before us. For we would then have the benefit of the labors of those who had preceded us, and the results of those labors arranged, as in the dictionary, for our use. Should a man attempt to aquire a full knowledge of insects, without the assistance of others, "he would need the eyes of Argus,—the patience of Job,—and the years of Methuselah." The observations of the many who have passed their lives in this study, have been the means of collecting a body of facts, which may be learned in a short time from the works in which they have been published, while without the assistance of them, a man might spend his whole life in vainly attempting to obtain a knowledge of those facts.

Many persons are ignorant of the fact, that most insects pass through four distinct states, or stages of existence, the egg, the caterpillar or grub, the pupa or chrysalis, (the dormant state,) and the perfect insect. To destroy insects effectually, we should be able to recognize them in all these different states, because in some they are more easily destroyed than in others. We generally attack them in that state in which they commit the injury, but this is not always the best way of preventing their attacks. It is in the second stage that they generally do the most mischief, but it is frequently much easier to destroy them in the egg, or to destroy the parent or perfect insect before it has laid them. This we can only do by being able to recognize them. The orchard caterpillar is familiar to almost every one, yet few are acquainted with the appearance of its eggs, or with the yellowish brown miller that lays them; yet it is far easier to destroy a small group of eggs upon the branches, than a large nest of devouring caterpillars which every group of eggs produces.

Absurd practices are sometimes pursued from an ignorance of the manner of the changes in insects. "In Germany," according to Kirby and Spence, "the gardeners and country people, with great industry, gather whole baskets full of the dastructive cabbage moth (*Noctua brassicæ*) and then bury them—which is just as if they should endeavor to kill a crab by covering it with water—for many of them being full grown and ready to pass into their next state, which they do under ground, instead of destroying them by this manœuver, their appearing again the following year in great numbers is actually facilitated. Yet this plan, applied to our common cabbage caterpillar, which does not go under ground, would succeed." Another instance. A gentleman walking with his friend on a farm in Yorkshire, England, observed several patches of dead grass in a field, and in the middle of each patch a stick was stuck up with a bunch of rags on the top. He at once knew that the grub of the cock-chafer had eaten the roots of the grass, which being pulled up by the rooks in order that they might destroy the grubs, these birds had been mistaken by the tenant as the cause of the mischief, and the rags were placed to frighten them away, though by destroying the grubs they were saving his meadow. As a contrast with these practices, we may mention one of success arising from careful scientific inquiry. When the timber was found to be perishing in the dock yards of Sweeden, the King applied to Linnæus to discover a means for pre-

venting it. He accordingly discovered the insect which caused the mischief, and ascertained the time when it laid its eggs; and by sinking the timber during that time under water, it was saved from further injury.

It is true that a great number of the destructive insects which trouble us, are undescribed, and their habits not pointed out in any existing works on Entomology; but a small knowledge of this science will enable us readily to determine the family and the genera to which they belong, and furnish a very useful clue to their habits, as all insects belonging to the same genera, have a greater or less degree of similarity in this respect; and this knowledge will sometimes prevent gross mistakes. Some of our readers will doubtless recollect the case of the discovery being announced through one of the first scientific periodicals of this country, that the Hessian fly was a species of the genus Aphis, (plant louse,) which the writer had determined by witnessing the change from the small grub to the perfect insect. The slightest knowledge of the science, and of the two genera to which the Hessian fly and the plant lice respectively belong, would have taught him his error, and that it was occasioned by a want of scientific precision in the experiment.

But even where observations are correctly made and important results determined, a great loss is frequently sustained by the insects in question not being described with sufficient distinctness to avoid confounding them with others. This loss can only be prevented by the knowledge of their distinctive characters, which the science alone teaches. We have sometimes been exceedingly puzzled, in some detailed accounts of the habits of insects, or modes of destroying them, to know what particular species were intended. Perhaps the whole description may be, "a two winged green fly," when there are hundreds of kinds to which this would apply,—or "a small black fly," to which the same remark would apply; the "common caterpillar" is noticed, and the way of preventing its ravages pointed out, when there are a large number of caterpillars, not only very common, but destructive;—sometimes however the description may be more minute; but then the characters given, may be those common to a large portion of the whole class of insects. These evils can only be prevented by an attention to the science of Entomology, which enables us at once to seize on the *distinctive* characters of an insect, or those few and clearly defined marks, which enables us at once to distinguish it from all others. And if all the observations which have been made in this country on this minute but formidable class of enemies, had been directed by the light of science, and each depredator distinctly pointed out (if the scientific name be not known) by a clear description, an invaluable body of useful facts would have been collected, where there is now but an unintelligible mass of confusion.

Frost

May be considered as a plough superior to any that can be made by the hand of man; it reaches, in its action, the minutest particles of earth, and by dividing and throwing them apart, renders the soil loose and friable. Hence the great advantage of laying hard and heavy soils open to the frosts of winter by means of fall ploughing.

Earthworm.

Earthworm, eelwo[illegible]ngleworm, fishworm, are names of the same individual, and by which a common, and, as is generally supposed, perfectly harmless worm, is known, in different parts of the country. This worm, however, is becoming so numerous in some places as to be quite a nuisance, and some apprehensions are entertained that it is more injurious to plants than has been supposed. The cause of its great prevalence in some places, while others are exempt, does not appear to be well understood. Its appearance in great numbers in some gardens, for instance, is attributed to frequent and high manuring; but that this is not the sole cause is evident from the fact, that other gardens of similar soil, and manured equally high, are entirely free from them.

We know of a neighborhood in which several of the wells of water became undrinkable the past summer from this cause. On clearing them out the earthworm had accumulated in such great and almost incredible quantities, as to impart to the water the most noisome and intolerable taste and smell, difficulties which ceased when the worms were removed. Two or three years since, a farmer of our acquaintance sowed a large field with wheat. It came up well, but the plants on a part of the field somewhat lower than the rest, not wet, but inclining to muck, soon began to turn yellow, and in spite of a fine season for their growth, mostly died. The owner, and others, examined the ground repeatedly, and no cause for the death of the plants could be discovered, unless it was the earthworm, which filled the whole of the diseased part in countless multitudes.

Admitting these charges against the worm are just, how can its increase be prevented, or the worm destroyed? Would not a liberal dressing of quick-lime, well mixed with the soil, do the business effectually?—or when it was not convenient to plough, would not spreading the lime on the surface immediately after or before a shower, during the summer, destroy them?—as it is well known that at such times, where they are numerous, the wet surface will be covered by them. When any insect or animal, however well known, shows an uncommon and disproportionate increase, it should at once attract the notice of the farmer, as danger to his interest in some shape, is at such times always to be apprehended. G.

Paints for Preserving Wood.

The following is the mode of making a composition for preserving wood work, given in Young's Calendar, who says, "it will preserve planks and boards for ages." It is easily made and applied, and its efficacy tested.

Melt 12 ounces of rosin in an iron pot, add 3 gallons of train oil, and three or four rolls of brimstone; when melted thin, add as much Spanish brown, or brown ochre, first ground fine, with as much oil as will give the required color; lay it on with a brush as hot and thin as possible; and some days after the first coat is dry, lay on another.

Leaves of Plants.

"That surface of leaves which is exposed to the direct rays of the sun is covered with a thick epidermis which resists the calorofic rays. In herbaceous plants, as in the stalks of grasses, this covering is composed principally of silex. In other plants it is analagous to resin, wax, gum, or honey; while the epidermis, which covers the opposite sides of the leaves, is fine and transparent. It is by this, that transpiration and the absorption or nourishment from the atmosphere are carried on. If we should reverse the order of things, and present the under surface of a leaf to the rays of the sun, we should very soon see that it would make great efforts to resume its natural position."

This last remark is very just, and we have within a few days witnessed a beautiful illustration of its truth, in some leaves growing on the vines of the *Solanum dulcamara*, or common bittersweet, trained over the windows of a friend's house. Some of the long vines had fallen from the trellis work downwards, thus completely reversing the order in which they had grown, and turning the lower surface of the leaves uppermost. In a few days the natural position of the leaf was resumed, by twisting the stem of the leaf, so that the smooth green surface of the leaf would still be exposed to the sun's rays. No person can have witnessed this striking proof of the affinity of plants for light, without being struck by the singular and inexplicable connection which exists between the rays of the sun and the growth of vegetables. The physiology of plants is one of the most interesting subjects which can interest the student of nature; as in the circulation of their fluids, and their connection with light and the atmosphere, are involved principles which must ultimately affect the whole circle of science. When we see a leaf displaced from its natural position, by a positive exertion of strength, and one of seeming volition, turn on its footstalk so as to again bring its bosom to the sun, we cannot hesitate to admit that a power unseen, but not the less active, is at work in nature,—a power, the laws of which every particle of matter obeys, and to which all organization is owing, but the influence of which is at present little appreciated, and very imperfectly understood. G.

Letter from Indiana.

The following is from a subscriber at Indianapolis, dated 20th of last month:

"After a rainy time in the early part of spring, the season has been rather dry and cool, having had but little uncomfortable hot weather. I find a greater difference in the temperature between night and day through the interior of Indiana than in Western New York. When the heat is oppressive for a few hours during the middle of the day, the nights are comfortably cool. I attribute the change to the greater portion of the surface of the ground being covered with a heavy and thick growth of timber, through the thick foliage of which the sun's rays rarely find way to the earth, and as it declines in the west, the dampness arises and cools the air, taking several hours of the next morning's bright and unclouded sun to restore it to summer heat. During the forepart of summer

we had frequent showers, with some thunder and lightning; but since midsummer, much less rain and scarce any lightning.

"During two years' observation, I think there is much less wind during the year than I have been accustomed to at the east, although sometimes, preceding showers, a heavy gale has prostrated timber in its course, but in traveling through the woods, but few cradle knolls, (as called in New York,) are seen, and land seeded down almost any where makes fine smooth meadows without ploughing.

"For ten days past we have been visited with rain almost daily—sometimes pouring down very fast, but mostly moderate and weather quite warm; but as it has about approached the equinox, presume we shall before long be greeted with fair weather.

"Crops of all kinds have been good, and corn, the main crop of this country, is now generally out of danger of frost, and from the abundant quantity will be much lower in price than it has been for the year past. It is thought there are a less number of hogs in the country than common—pork being high last fall a less number of store hogs were kept, and many of those have been bought up and driven to Ohio and Kentucky, where they have sold for 6 cts. per lb. gross weight.

"The peach trees have this year done nobly, many of which have broken down under the weight of fruit. There had been but few peaches for the last 6 years. Apples pretty plenty.

"But little sickness has prevailed through this section of country this year.

"The tide of emigration has been steadily rolling on through the interior for some weeks past, and the new lands are filling up fast, although we see but little of the mighty rush that pervades the northern waters."

The Snow Storm.

A letter from our friend at Otisco, Onondaga county, of the 8th inst. says:

"The snow storm of the 5th inst. has exceeded in extent and severity any thing on record in this latitude, and at this season of the year. It commenced about 3 o'clock Wednesday morning, continued with violence through the day, and on Thursday morning, although it must have settled considerably, lay about 2 feet deep. Its weight was such as to cause vast injury to forest and fruit trees, the latter of which were covered with both leaves and fruit, and in many instances were totally destroyed. During the height of the storm on Wednesday, we witnessed a curious assemblage of birds in the shrubbery and trees of the garden. They seemed to have been taken by surprise, and were only anxious to find a shelter. Some of the little warblers I am confident found themselves in unwonted company. Among the assemblage, and flitting hither and thither, I observed the common robin; the blue-bird; the yellow-bird, now shorn of its brilliant summer dress; the phebe-bird; two species of the black-bird, *Quiscalus ferrugineous*, and *Quiscalus baritus;* the yellow hammer; the little spotted woodpecker; and two or three kinds of the sparrow tribe; while the common wren sought shelter in an out-house from the peltings of the pitiless blast. Large quantities of late sowed oats, in this section of the country, are still in field; apples ungathered, and potatoes not dug. Farmers have received fair warning of the rapid approach of winter, however, and if they are caught unprepared now, the fault can scarcely be other than their own."

The Season.

(*In a letter from Cayuga county of the 6th inst.*)

This autumn will long be remembered for the severity of its frosts and the depth of its snow. In more than thirty years, during which time I have been a resident of this county, I have seen none that would bear a comparison. On the morning of the 28th of last month, I was surprised to find the ground covered with snow. The shore indeed, was exempt from this extraordinary visit, owing to the exhalation of the lake; but one mile back, it was an inch deep, growing deeper with the remoteness from the water, and the ascent of the land. At Poplar Ridge, it was not less than three inches.

On the two following mornings, severe white frosts occured. The weather then became moderate but variable; and yesterday morning those who got up late, found every thing wrapped in the mantle of winter: it only began to snow about day-light. It continued however, through the day, with some wind from the N. N. E., increasing in depth, but much of it melting as it fell. If the quantity had all remained, wet as it was, it must have been more than a foot deep, probably two feet,—for even this morning, on places where the warmth of the earth could not reach it, it is full six inches; on the bare ground it is four inches; but doubtless much deeper on more elevated lands.

The damage to cultivated trees, from the breaking down of their limbs, is without a parallel in this country. When the danger from the weight of snow became apparent, one of my family proposed to shake off the load; but it soon began to snow faster, and we had to leave them to abide the result. The cracking and crashing through the night was frequent; and this morning there is work enough for pruners—much for the ax and for the saw to perform.

☞ Since writing the foregoing, I have made further observations. The snow was found to be much deeper on ascending to the east, and only one mile and a half from this place in that direction, it was one foot in depth this morning. The woods have the aspect of a new clearing when it is *underbrushed*, so many branches have fallen from above. Among hundreds of locust trees from fifteen to thirty feet high, not one has escaped without injury; and from many, the entire top is broken off. Truly, this will be a memorable time.

Autumnal Flowers.

(*In a letter of the 27th ult.*)

I eschew Green House plants when I can; but *Lophospermum scandens* was a present from a distant friend. It is quite an ornament to the garden. The flowers are tubular, two inches long, as thick as one's finger, and a fine rosy color. It is a climber and grows five feet or higher. So fine a plant ought not to perish in the frost, and so I may be induced to make it an inmate through the winter. It is a native of Mexico.

Seeds marked *Coreopsis atro-sanguinea* were received from a seedsman as something new, and planted with great care; but the flowers prove it to be the common variety of *Coreopsis tinctoria*. Are not our seedsmen in danger of running down in reputation—the honest and deserving along with the roguish and the careless, unless a new leaf be turned over in their business? It appears so to me; and the time may not be distant when such as *know what seeds they sell*, and *sell nothing but what is genuine*, will stand in high estimation.

Viola tricolor runs into many varieties. I received a paper of seeds last spring, said to have been put up from a mixture of *sixty* kinds; and truly some of the flowers differ in size and color from all that have grown before in my garden. This plant *sometimes* remains in bloom beneath the snow; and perhaps has a better claim than any other among us, to be called *the flower of all seasons.*

Collomia coccinea has too small a flower, and too few of them, to be showy, yet the color is scarlet and the leaves not inelegant. It appears to be an annual.

Gilia coronopifolia is a native of the Southern States; and one of our most elegant plants, whether we consider the delicacy of its leaf, or the beauty of its flower. "Corolla bright red, within yellow, beautifully dotted with red." It is the *Ipomopsis elegans* of Michaux and the *Cantua coronopifolia* of Willdenow and Elliott.

Salvia angustifolia is a tall annual with fine blue flowers; and as these are produced in great numbers, its appearance when in full bloom is very interesting. It is a southern plant however, and seems to require more time than the shortness of our summers will admit. I am apprehensive it will not mature its seed; indeed some that were transplanted from the hot bed are not yet in flower.

Smoking Meat.

Extract of a letter from a subscriber at Cincinnati:

"How 'doctors disagree.' I entirely differ from one of your correspondents about smoking meat. I would have a perfectly air tight smoke-house, preferably of stone or brick—if of log, plastered, and the meat kept constantly in the dark. If it contracts a slight mold, so much the better. No insect will breed in such an atmosphere. There is no occasion of putting meat intended for smoking into pickle. Let it be properly salted, and before hanging it up let it be washed in hot lie. Let it hang till it is dry before smoke is made under it. Green hickory wood is best to make smoke. I have never had any spoiled meat. Besides, it will be found the least troublesome way, and very safe, as but little fire is required to have smoke enough."

☞ "X." on the Education of the Farmer, in our next number.

Inquiry.

Will the editor, or some of his correspondents, inform us through the medium of the Farmer, of the proper time for taking cuttings from the "Multicaulis," with the manner of preserving to the time of planting. W.

COMMUNICATIONS.

Influence of Canals and Rail-Roads on AGRICULTURE.

One of the most striking signs of the times in which we live, and that which will most probably leave the deepest impress to after ages, is the spirit of improvement which is showing itself in the construction of canals and rail-roads. These improvements are felt in every part of our extended country, and in the impulse they give to every branch of commerce and industry; but it is with their influence on agriculture that we as farmers have principally to do. They furnish facilities to travel—they assist in the transportation of merchandise—and they enable the farmer to carry many things to a profitable market, which from their bulky or perishable nature, were formerly nearly worthless to him; and unless we are much mistaken, much of the agricultural prosperity we have enjoyed for a few years past, and the present high prices of real estate, may be traced to these sources.

Canals and rail-roads have an influence on the profits of agriculture during their construction, by withdrawing large numbers from the culture of the soil and employing them on such public works. Whatever may be the employment of men, they must be fed; and while the number of mouths remain the same, any reduction of the class of producers has a sensible tendency to increase their profits. There are at the present moment probably not less than 200,000 persons employed on such works of improvement, consuming annually a million and a half bushels of wheat, vast quantities of provisions, potatoes and other vegetables, independent of the immense demand for the coarser grains, suitable for horse feed, and for all which they are of course dependent on the agriculturist for a supply.

Improved means of communication profit agriculture materially, by lessening the cost of articles of prime necessity in farming, thus enabling him, with little additional labor, to greatly augment his productions. To illustrate this we may take the Erie canal and the single article of plaster. From the Mohawk to the Niagara the facilities of transporting the ground article are such, that in the few districts where it is not found, it may be purchased at such low rates as scarcely to form an obstacle to its general use. The easy acquisition of plaster has, by introducing the extensive use of clover in rotation with wheat, nearly doubled the capacity of the country for many miles on each side of it, for the staple commodity of our state, and millions of bushels are yearly produced, that but for plaster and clover would have no existence. Previous to the construction of the canal the price of salt furnished a serious drawback to the prosperity and profits of the farmer in our western counties. If he devoted his farm to raising cattle, salt was indispensable to their growth and health; if the dairy was his object, there was an additional demand for salt created, which together sensibly reduced the aggregate profit of the farm. Already have our canals, by furnishing facilities for the removal and transportation of mineral manures, such as marl, plaster, &c., and the greater choice of markets they have offered, as well as in effect lessening the distances to such markets, benefitted the country beyond what the most sanguine once dared to hope. Real estate has increased in value fifty millions in consequence of this state of things, thus giving to agriculture a most stable foundation, in a success almost unexampled. "During a tour," says the celebrated Chaptal, "which I made with Napoleon in Belgium, I heard him express to one of the council of a department, that he was surprised at the vast extent of waste land over which he had just traveled. He was answered thus: 'Give us a canal to transport our manures, and to convey away our products, and in five years this sterile country will be covered with crops.' The canal was afterwards constructed, and the promise realized in less than the required time."

Canals and rail-roads operate to the benefit of the farmer by building up cities and villages all over the country, in which mechanics, merchants, and professional men congregate for the advantage of their respective callings, and where as a matter of course manufacturers usually establish themselves. Here those products of the field and the garden, the whole tribe of culinary vegetables and the produce of the fruit orchard, which formerly were nearly worthless, are now disposed of at a decent profit, an exchange beneficial to both, but which operates decidedly in increasing the sum total of the agriculturist's gain. The least observation on this point will show, that the influence of these improvements is here practically and beneficially exerted.

Perhaps the effects of canals and improved roads are seen most directly exercising their powerful agencies, where they bring into general use articles of the greatest value and of the first necessity, but which without them could never be got to market, or their production carried on to any considerable extent. We will endeavor to illustrate what we mean.

Before the construction of the Erie canal, the salt springs of Onondaga were of comparatively little value, from three to five hundred thousand bushels being made annually; the salt was wanted, but the cost of transportation was so great, that the least possible quantity was used. The canal was made, and the production has risen to two or three millions—the salt trade has been one of the most active causes in the growth of one of the most flourishing and prosperous villages of New York, Syracuse,—and the important fact has been developed, that the state, in those springs, possesses a source of revenue which in an emergency may be made equal to the entire civil expenses of the state.

Not widely different are the facts with regard to the immense beds of sulphate of lime, or plaster, which almost line the canal from Madison to Niagara. Those extensive masses of beautiful stone produced from the celebrated Onondaga limestone quarries; and that important product, water lime, so abundant in the same region, so useful in most public works, which has heretofore been imported from abroad at such an expense, and for which the demand is constantly increasing, may almost be said to owe their origin, certainly their working to the same cause.

1800 tons of grindstones are imported into the United States annually from Nova Scotia, for which about twenty dollars per ton is paid. A large proportion of these come to New York. Now it is well known that the southern tier of counties in this state have, in several places, deposits of sandstone nearly or quite equal in grit to those imported, but situated in such secluded districts as to be little worked, and consequently nearly worthless. One of these deposits, in the county of Allegany, we have examined, and this alone would be abundantly able, if worked, to supply every demand that could be made. As it lies near the route of the Rochester and Olean canal, if that work is completed, it is probable it will soon be more extensively wrought, and there can be no doubt that twenty thousand dollars expended in that section annually in the purchase of grindstones, would materially benefit the agriculturists in the vicinity.

The great coal field of Pennsylvania occupies almost the whole central tract north of the Schuylkill river, and between the Delaware and the Susquehanna. Though the coal was known to be of the first quality, and in inexhaustible quantities, the difficulties of penetrating the interior mountainous district to the beds were so great, that little of it was used, and the cities, where coal of necessity was extensively used, depended on precarious supplies from Liverpool or Richmond. With the exceptions of a few favored sections, the agriculture of the Pennsylvania coal region was at the lowest ebb; the scattering inhabitants obtained but a bare subsistence, and large tracts of real estate might be purchased for a song. Stimulated by the example of New York, the state set about the work of internal improvement in good earnest, and canals and rail-roads have penetrated the interior in all directions. As elsewhere, where the experiment has been fairly made, the result has been astonishing. It has furnished additional proof that every dollar expended in works of permanent utility, and in developing the resources of the country, is felt with fourfold effect in the agricultural prosperity of the favored region. As in the case of the Onondaga salt works, the extension of canals especially showed the capabilities of the districts penetrated by them, and the coal sold in the market quickly increased from tens to thousands of tons. In the Philadelphia market in 1820 there were 364 tons sold.

1825	35,536
1830	192,934
1835	680,750

The value of the coal now sold is not short of five millions of dollars a year, and the increase in the value of real estate and agricultural prosperity has been in a ratio scarcely less rapid. It is true that in some of the instances we have mentioned, the connection between them and agriculture is not so plain, as between plaster or manure, and the operations of the farmer; still, their influence on his prosperity is not the less marked or decisive.

That such public works as are now progressing in the country *may* become a curse few will deny, and where they are constructed by companies, the charter conferring such powers cannot be too strictly guarded. In all cases the state should reserve the right of resuming the control, should oppression of the public, or malpractice in any way, require the act. Thus far, howe-

ver, the influence of canals and rail-roads has been excellent, and no where has this influence been more marked than in our agricultural districts. The price of freedom is eternal vigilance, and incorporated companies must ever be made to feel that they are the servants, not the masters. A.

West New York.

This is one of the most beautiful and fertile agricultural districts in the world. The face of the country is diversified and charming—being flat, or gently sloping, on the borders of the great lakes; more and more undulating as we recede from these; rising into hills, and assuming a more broken and diversified aspect as we approach the dividing ridge, which seperates the great northern plain from the slope which feeds the Chemung and Allegany; and finally, sinking into the basins of those rivers, upon our southern border. The northern portion is divided into two great plateaus, or plains, terraced, and seperated by the Mountain Ridge; which starting from the Niagara at Lewiston, is cut by the canal at Lockport, and passing in an E. S. E. direction, forming a barrier to most of the small lakes, its identify is finally lost in the high grounds of Onandaga. The lower plain may be considered as having its eastern termination at Utica, and its southern at Ithaca, the first in the valley of the Mohawk, and the latter at the head of Cayuga Lake. This section comprises in its general level the Oneida, Onondaga and Cayuga Lakes; and such is its general level, that the canal running east andwest, is uninterrupted by locks a distance of 69 miles on one level, and 64 miles on another; and a sloop canal, from Sodus to Ithaca, in a north and south direction, which is now about being commenced, will require no lockage, except near its outlet into Sodus Bay. The canal on the upper plain, from Lockport to Lake Erie, is also unobstructed by a lock. Rail-roads are being constructed upon these great plains, in every direction, with comparative trifling expense; and villages are springing up at the points of termination or intersection, with the freshness and beauty of youth, and the enterprize and vigor of manhood. Dividing the country into three zones, the lower one may be denominated the wheat district, the one above it the grain and cattle district, and the higher on the grazing district, admirably adapted to cattle and sheep husbandry, and the business of the dairy. And we are not sure, that at no distant period, the latter will not surpass the others in the grand requisites of a prosperous, virtuous and *republican* community. The whole country is susceptible of a high state of improvement, and capable of employing and sustaining a population ten times greater than their present numbers.

West New-York belongs to the secondary formation, and abounds in the vegetable and animal matters, which are the certain and only source of fertility. Its soil is also endued with a property, not common to other formations, which under discreet management, will render it a permanent wheat growing district—it abounds in a carbonate of lime—it is a calcareous soil, in contra-distinction to the argilo-silicious, i. e. sand and clay, which prevails in other sections of the state. A calcareous soil is not only better adapted, naturally, to the purposes of husbandry, than an argilo-silicious one, from its better admixture of earths, but its fertility is longer preserved, and more easily restored. In calcareous soils, we are advised by M. Puvis, "crops, without manure grow, feebly it is true, but without appearing to exhaust the soil in a sensible degree; in the other [argilo-silicious,] without manure they will scarcely grow at all." Again: "Where an equal quantity of manure is given to the two soils so different in their natures, its effects on the calcareous soil is twice as great as on the argilo-silicious soil; whence we should naturally conclude, that the faculty of imbibing the principles of vegetation from the atmosphere, [and of combining and dispensing them to the crop, from the manures furnished by art,] is much more powerful in the calcareous soils, and the vegetables it produces, than in the argilo-silicious soil, and it is that which constitutes their greatest difference." The great agriculturist, the late John Taylor of Vir. maintained that the atmosphere was the great store-house of vegetable food, abounding in the elementary matters of plants; and the argument of M. Puvis goes to show, that calcareous earth, or the matter of lime, siezes upon the elementary food in the atmosphere, and imparts it to plants more readily and abundantly than clay or sand; and in this position he is undoubtedly correct. These facts go to multiply and strengthen the inducements for applying marl or mild lime, to argilo-silicious soils to increase their fertility.

But though the soils of the west are better constituted, for the foregoing reasons, for enduring bad treatment, than those of the eastern and southern sections of the state; though they will wear longer, and can be more easily renovated, their fertility is by no means inexhaustible as some seem to imagine. Even the beautiful lakes would in time be dried up from evaporation, were their waters not constantly replenished by streams and springs. So will the soil become exhausted of its fertility, if vegetable matter, the food of plants, is annually carried off, and none returned; and althongh a new stratum of fertility may be brought to the surface by the trench plough, or clover made to alternate with wheat, these will but prolong, not perpetuate fertility. The substratum will in its turn become exhausted; and the clover, even should it not, as we suspect it will soon fail in its accustomed returns, will but illy compensate, in the food it gives to the soil, for the exhausting effects of the wheat crop. We here repeat, that within our recollection, the whole of the wheat and flour sent down the Hudson from Albany, Troy, &c., and the quantity was great, was grown in the valley of the Mohawk, on the eastern borders of Lake Champlain, and in the counties of Albany, Rensselaer, Saratoga and Washington,—and that these districts do not now grow one fifth of the wheat required for the use of their population.

It appeared to us, from superficial observation in passing through the country, and without making any pretensions to geological science, that the strata of West New-York was originally deposited in nearly horizontal layers, by a great aqueous revolution, the different strata of clay, sand and lime, and the intermediate gradations or mixtures, alternating with each other; that after having levelled it in surface, in the process of passing off, to a lower level, by the disrupture of some opposing barrier, the waters, by abrasion formed it in basins or hollows, or, where operating with less force, left an undulating or rolling surface, and wore through and carried off, more or less, according to the depression of the underlaying strata; and that no great internal convulsion of the earth had subsequently happened to disturb the horizontal position of the layers. We inferred, from this conviction, that at the same elevation, upon each of these great plains, or basins, the character of the soils, as regarded their [earthy constituents, were nearly similar. We noticed, that clay loam, sand loam and sand predominated as we ascended from the lower levels. And here we will quote an idea of M. Puvis which we think is peculiarly applicable, and may be highly serviceable, to the west. It is—"that the formations in any one basin being composed of the same fragments, and owing to the same revolutions, the soils of these basins presents, through the whole extent, a great analogy; and consequently, the practices of agriculture which have succeeded in one point, may be applied, the difference of climate excepted, to the analogous formations; agriculture perfected on some points of a basin, may give lessons almost certain for its whole extent." If the truth of our conjectures should be confirmed by geological investigation, and the order and depth of the different deposits determined, the discovery will greatly aid the purposes of agriculture, and faciliate the discovery of gypsum and other fossile productions.

The farms in West New-York are of princely dimensions, varying from two hundred to twelve and fourteen hundred acres. The farm buildings, where the country has been long settled, are large, substantial and often splendid; too often lacking, however, the accompaniants of a good garden, and those rural embellishments, which are ever an indication of comfort, taste and refinement. But of the farming, we cannot say it is good—it is generally improvident and bad; and there are two cogent reasons, we apprehend, which will prevent immediate and extensive improvement, viz. the natural fertility of the soil and the great extent of farms. The cultivators seem content with the ample patrimony which nature has provided for them, without heeding the admonition, with which older settlements are replete, that soils under a reckless management, will diminish in fertility. Their study is, rather to increase their acres, than to preserve the fertility of those they already possess. Nay, many affect to believe, that their lands will continue to produce great wheat crops, without deterioration, and without manure, especially if this crop is alternated with clover. We will state a fact that will prove the fallacy of such calculations. One of the most intelligent farmers of the west, who has occupied a first rate wheat farm for about twenty years, near the outlet of Seneca Lake, told us that he had kept an accurate account of the product of his wheat crop; that dividing the time of his occupancy (he took it in its wild state) into three equal periods, he ascertained that the average product of the first period 29 bushels of wheat per acre; of the second period 25 bushels, and of the third and last period 20 bushels per acre—thus showing a dimunition of products, and consequently of profits in this short period, of thirty-three per cent, or one third. This dimunition, at the present price of wheat, would amount to twenty dollars the acre per annum. Thus two acres of land, in its virgin state, gave as great a product as three acres do now, and with less labor to the acre then, probably, than is required now. We ought to add, that our informant, contrary to common practice has been in the habit of saving and applying his manure, and of alternating clover. With regard to the quality of farming, it is impossible to manage a very large farm well, though it may be managed with great *present* profit, which the limited capital and labor, which it is there customary to expend upon them. The tendency must constantly be to deterioration, and to a consequent diminution of acreable profits. The vallies of the Hudson & Mohawk have been once as celebrated for their fertility as the west now is; but a reckless system of cropping exhausted it. But brighter times are dawning upon us; a better system of farming is restoring to the soil its wonted fertility; science is contributing her aid; and these vallies at no distant day, will make as large returns to agricultural labor as any portion of our country. Let the west be admonished by these lessons, and learn to be provident of the munificent bounties of Providence.

Although, from the preceeding considerations we do not look for great and immediate amelioration in the condition of western farming, yet there are improvements of such manifest advantage, and involving such trivial expense, that we may hope to see them gradually introduced. We will now speak particularly of two of the more prominent—MANURING and DRAINING, which lay at the foundation of good husbandry.

We may as well expect our farm stock to become fat without the provident care of man, as to expect that our soil will continue to afford its accustomed yield, without returning to it something of the vegetable matter which we are annually taking from it. To make fat animals, we cultivate for, and feed them with the grain, the pulse, the roots and the grass of the farm. If we would make good crops, we must in like manner provide them with an abundance of nutritious food, which is furnished to our hands in the dung, straw and animal and vegetable refuse of the farm which constitute the true aliment of plants. And yet, notwithstanding the self-evident truth of these propositions, we are astonished to see, in the whole route from Utica to Buffalo, a reckless

disregard of this primary maxim of good husbandry. We saw vast accumulations of manure in the cattle yards, and immense quantities of straw about the outbuildings and in the fields, seemingly regarded as incumbrances rather than as precious sources of fertility and of profit, and we often saw neighboring cornfields literally starving for want of this vegetable aliment. On asking an inhabitant why piles of manure, which we pointed out, were suffered to accumulate, year after year, till they rotted the sills and sides of the barn, and why they were not carried to the field, he replied, with great *sang froid*, that the soil was already rich enough. We mean to except from these general remarks, many notable instances of judicious and enlightened husbandry.

No country is better adapted to improvement by underdraining, than many districts of West New-York. There are immense plains, gently sloping, either possessing a clay soil, or resting upon a subsoil impervious to water, on which crops are liable to suffer greatly from the extreme of wetness and drought. The skill and labor of the farmer should be employed to guard against these extremes; an ignoramus may raise good crops when he has a good soil, and a good season. The inclination of the surface is not sufficient to enable the excess of water to pass off readily after heavy rains, and the soil or subsoil will not permit it to pass into a lower and more porous stratum; the consequence is, that it reposes in excess, in wet seasons, near the surface, and becomes highly deleterious to the growing crops. The ground from being thus saturated and distended with water, on the occurrence of drought, exhibits the other extreme,— it contracts, and hardens like a brick bat, exhibiting fissures of cracks in every direction. Did the water merely filter through the soil, and pass off, as it would do in underdrains, and does on steep declivities, the surface would remain comparatively porous, neither distending nor contracting much, and pervious to the kind influences of the sun and atmosphere. Clay never becomes so compact and hard as when, highly saturated with water, it is poached with the tread of animals, and afterwards dried by the sun. And this evil is likely to increase as the soil, divested of its vegetable matter, an inevitable consequence of hard, and even of ordinary cropping, becomes consequently more compact and impervious. If water reposes within the reach of the roots of plants, it necessarily excludes air from them,— which is an indispensable requisite to the decomposition of vegetable food, and to the healthy development of cultivated crops.

The cultivation of the land in narrow or moderate ridges, in the direction of the main slopes would, in some measure, remedy the evil: sowing on the first furrow, the fallow being a grass ley, and the furrow-slices being made to lap on each other, so that each should become an underdrain, would effect a further improvement; but the only thorough cure must be sought for in a system of thorough Scotch underdraining, which will pass off any excess of water, which may penetrate the surface or rise from springs.

But with all the fertility, all the beauty, and all the enterprize and thrift, which latter are great, there is lacking in a great portion of the west, one of the essential comforts of life—*a supply of pure water*—and there is likely soon to be *a want of timber for fencing and fuel*—another of what we class among at least the conveniences of life. Water, for farm and family purposes, is scarce in the northern section, and the quality indifferent or bad. There is little or no waste land; and the fear is, that the hope of present gain will induce a wanton destruction of timber, so as to leave the next generation comparatively destitute. Providence seems wisely to have furnished to every country some of the good things of life, but to no country all of them, lest man should forget his dependance and his duties. The want of water may in a great measure be remedied by artificial ponds, filtering cisterns, and probably by artesian wells. The inclined plane and tenacious soil are well adapted for the first, as the surface water may be readily concentrated at a desired point, and clay soils require no puddling, though bottoms of ponds should be bedded with stones or gravel. If constructed at the intersection of division fences, the same pond may serve for three or four enclosures. If a system of underdraining is adopted, the water drained off may be conducted to these ponds, or into tanks or troughs, accessible to cattle. For culinary and other family uses, rain water, when filtered, possesses the highest value. Every house might, at no great expense, have a durable filtering cistern constructed, made of cement and stone or brick, and upon Foster or Van Kleeck's patent circular plan, which would receive water from the roofs of buildings, and purify it for use. And lastly, artesian wells, in which the water rises to the surface, or nearly to it, we believe, from the general configuration of the country, might be resorted to with strong probability of success. We saw, near Geneva, a well of this character, from which constantly flowed a large stream of water. It is our intention, as soon as we can collect the requisite data, to describe the mode of boring artesian wells. We give, in another column, directions for making artificial ponds and filtering cisterns.—*Cultivator.*

Raising of Hogs.

A subscriber and highly esteemed correspondent living in North Carolina, has at our request furnished us with the following communication, and we take pleasure in recommending it to the attention of our readers:

Mr. Roberts—During the past winter I spent some time in Raleigh, N. C. and whilst there a drove of near two hundred hogs came into the city for sale. They were much larger and better fattened than the pork usually sold in that market, and that circumstance led me to enquire whence they came. On enquiry I found they were fattened in a section of North Carolina which is almost exclusively devoted to the cotton culture. This excited my surprize, inasmuch as I knew that it was an almost universal opinion of the cotton planters, that the business of making pork was much less profitable than growing cotton, and further, that in the north east countries of that state, though exclusively devoted to the culture of grain, yet the farmers even in that section prefer selling their corn to converting it into pork, and many of them scarcely make a sufficiency for their own use, and all insist that it is a losing business to make it for sale. I felt some curiosity to hear from the owner the cause of this departure from the general practice of the country. I found him a very intelligent and communicative man. On stating to him the views I have above presented, he informed me that he had once held the same opinions, but that when strictly examined they would be found fallacious.

He admitted that the autumnal sales of the cotton planter would exceed those of the farmer who divided his attention between cotton and corn and pork, but insisted that the latter had the advantage in the long run. He enforced his views by the following reasons. The farmer who confines himself to producing a bare sufficiency of corn and pork for the use of his plantation will probably be short in good crop years and certainly so in bad ones.

His own crop is expended when those articles attain their highest prices, and when they are difficult to obtain. He is obliged to take a part of his team and some of his best workmen from the field to send a long distance for these indispensable articles, just at the time when his crop stands most in need of all his force. The high price of corn induces him to support his team upon the smallest possible quantity, and before his crop is completed, his laboring animals are so reduced as to be unable to perform their duty.

In addition to all these losses he is not unfrequently subjected to the vexation of deficient measure and a bad article. Taking all inconveniences into consideration, he said that he was fully convinced that corn and pork made upon the plantation of the owner was twenty-five per cent. better than the same articles purchased. He further remarked that much experience had convinced him, that every farmer should produce upon his own farm every article his family required, which the soil would produce well.

In relation to the unprofitableness of making pork, he admitted that as it was generally conducted it was a bad business, but insisted that it was owing to improper management.

He pointed out as very common errors the practice of permitting swine to become very poor and then attempting to fatten them, He thought that the expenses of a poor animal put into the pen and fed on corn would exceed the value of the same animal when fat.

When food of a coarse kind is plenty on the plantation the farmer feeds with an unsparing hand, and when these articles fail he leaves his hogs to shift for themselves and the consequence was that all become poor and many died.

On the first starting of vegetation in the spring a very poor hog will feed on unhealthy vegetables, though a well fed one will refuse such. This he added was a fruitful source of loss.

By a very little care a farmer might for ten months in the year provide for his swine coarse and unexpensive food, and for the remaining two months he would find his account in fully sustaining them in good order upon corn, though at twice its usual value. The great secret of his success, he said, consisted in never permitting his swine to decline, for a hog once in good condition and then reduced to poverty could not be brought back at less than twice the expense that would have maintained his condition.—*F. & Gar.*

Keeping Stock--A Dialogue.

Mr. Holmes—Being present, when the following *Dialogue* took place, between two farmers, and as winter is approaching, I think it may be useful to publish it, for the information of those who may keep stock next winter.

A. A yoke of oxen which git six feet six inches, cannot be kept in good flesh in winter, on less than 50 pounds of good English hay per day, or 1500 a month, without labor, by giving as much as they will eat—which is the only way to keep up their flesh.

B. There is no sort of need of their consuming such a quantity, or so much expense, per day--in the first place they will keep their flesh full as well by giving them something less than they will eat, if given to them; thus kept, their appetites will always be sharp and good, and they will better relish their food, and of course it will nourish them as much more, there will be no waste, in the next place. Much may be saved in the expense, by mixing straw, or poor hay, well with the good; if thoroughly mixed, they cannot avoid eating the less expensive hay. As all animals, (man not excepted) are fond of a change of *Diet*, much hay may be saved by Browse and a few roots. Thus I can keep a yoke of oxen for half the expense you name.

A. But it must take some time and trouble to mix the hay, straw, &c., in the manner you propose, and I have been in the habit of feeding my cattle without this trouble, and giving them what they will eat.

B. So I apprehended, and I was not clear but that you was so sparing of your trouble, that you neither carded your oxen, or see that they drank when they needed water, or that they were littered properly, and of course laid happily. Much depends, my friend, on these *little things*, if you desire to save hay, which we both agree, is of no small consequence this year, or indeed any year.

A. I will try your mode of keeping cattle, and if it succeeds I shall be much obliged, for my purse will not be drained as I expected, in keeping my stock through the approaching foddering time.

B. I am satisfied that good wheat straw, and a small quantity of roots every day will keep up their flesh, without any hay in cold winter weather, this has been sufficiently tried. By this time I hope you are satisfied that stock may be kept much cheaper than you had supposed, if you are, you will not sacrifice them this fall.

A. I certainly shall not, until I have tryed your mode of wintering stock—if it succeeds, it

must be of great consequence to farmers, even in seasons when hay is not very dear.

B. Why should not we learn something, by being deprived by Providence of the usual quantity of forage?—*Maine Farmer.*

Price of Dogs in England.

[We copy from the English New Sporting Magazine, a report of the sale of the late Duke of Gordon's 'stud' of greyhounds, setters, &c., for the purpose of showing the value of such animals in England. Gentlemen in the United States generally consider fifty dollars a full price for a well broken setter or pointer, and commonly expect to get them for ten or twenty dollars than any higher price. This low estimation of the value of dogs is well calculated to keep them scarce and worthless, because it effectually prevents breeding and breaking for sale. Mere amateurs cannot keep a supply to give away; and *dealers* will not unless they are *paid* for it—by fair prices. We have as good blood in this country as any in the Duke of Gordon's 'stud,' and all that is required is a price sufficient to enable breeders and breakers to raise them, to produce dogs in abundance in this country.]—*Am. Turf Register.*

The sale of the Duke of Gordon's stud of greyhounds, setters, &c., black trotting mare, &c., took place on July 17th, at Tatterstall's, and from their very high character, attracted an immense number of noblemen and gentlemen. The mare (winner of the Trotting Stakes at Northampton) was sold to Lord Alvanley, for 185 gs., and although nearly sixteen years old, was considered cheap. The setters fetched astonishing high prices, and some of the greyhounds sold exceedingly well. We select the principal lots:—

Setters:—Young Regent, 72 gs.; Crop, 60 gs.; Duke, 34 gs.; Juno, 34 gs.; Satan, 56 gs.; Duchess, 37 gs.; Random, 35 gs.; Bell, 34 gs.; Princess, 25 gs.; and two puppies, 15 gs. each.

Greyhounds:—Horatio, 8 gs.; Bachelor, 5 1-2 gs.; Vestris (with six whelps,) 11 gs.; Vaultress, 51 gs.; Victrix, 21 gs.; Victor, 30 gs.; Volant, 41 gs.; Venus, 15 gs.; Heather-bell, 11 gs.; Highland Laddie, 22 gs.; Highland Lassie, 20 gs.; Vivid, 37 gs.; Valiant, 20 gs.; and Vesper, 21 gs.; (the last three are puppies.) The whelps went low.

Retrievers:—Bess, and her puppies, 46 gs.; Rover, 23 gs.; and Diver, 42 gs.

Deer Hounds:—Roden, a remarkably fierce and powerful German blood-hound, 16 gs.. Tigress, an Indian blood-hound, 6 gs.; Fly, 10 gs.; and Blue Bell, (a puppy) 6 gs.

A spaniel realized 15 1-2 gs.; and five Scotch terriers, 63 gs.

Beet Sugar.

The Norfolk Beacon ventures the prediction that within twenty-five years, the principal productions of the northern and middle States will be silk and SUGAR. To any one acquainted with the efforts which have marked the last few years to introduce the culture of silk in New England, and the extraordinary success which has attended them, the prediction, so far as this article is concerned, will appear by no means visionary. With respect to the other, let no southern planter turn up his nose in contempt at the suggestion, relying upon the impracticability of cultivating the cane elsewhere than in his own genial clime. The Yankee will snap his fingers at him, and tell him he don't want the cane, so long as the BEET ROOT can be grown in the North. We have, from time to time, read with wonder and deep interest, the accounts which have reached us from France, of the success which has attended the improved modes of extracting sugar from the beet. Within a few years, the sugar manufactories in that country, have swelled from some 20 to 30, to more than 400, and every year is adding to the number. The sugar is of better quality, it is said, and is afforded at a less price than the foreign.

Foot Rot in Sheep.

Mr. J. M. Adams of Walpole, has communicated to us the following receipt for curing the above disease, which he says, he has proved in many instances, to effect a permanent cure, and has never known it to fail when properly applied. It consists of an ointment composed of equal parts of sulphur, tar and tallow, mixed together and applied to the parts diseased after pairing off the loose part of the hoof. This fact is worth being known by our Sheep-growers, as we are told, that there is danger of the disease being communicated to whole flocks, if not prevented by some course of medical aid.

List of Payments

For the Farmer from Sept. 8, to Oct. 13, 1836.

For vol. 3.
James Seaton.
J. S. Campbell.

For vol. 4.
James Seaton.
J. Earl.
J. S. Campbell.
O. Clark.
Geo. Rood.

For vol. 5.
James Seaton.
J. Earl.
J. S. Campbell.
A. A. Kellog.
Wm. Cambers.
C. Birdseye.
R. H. Heywood.
O. Clark.
Geo. Rood.

Last half vol. 5.
C. & J. M'Donald.

For vol. 6.
T. Lyon.
John Thompson.
Clement Harrison.
Henry F. W. Schutze.
A. G. Ransom.
Daniel Collins.
Gideon Pitts.
W. A. Bird.
Harry Allen.
A. Schooley.
F. S. Wiggins.
Wm. Carman.
James Seaton.
J. Earl.
J. S. Campbell.
C. & J. M'Donald.
A. A. Kellog.
Wm. Cambers.
C. Birdseye.
Wm. Turner.
R. H. Heywood.
Madison Ham.

Last half vol. 6.
George Blake.
Almeron Joselyn.
Volney Spalding.
Asahel Cowles.

For vol. 7.
C. & J. M'Donald.
R. H. Heywood.
Arthur Murphy.
Volney Spalding.
Moses Robinson.
Daniel Longstreth.
Edwin Scholfield.
Thomas Mather, Jr.

First half vol. 7.
Wm. Turner.
From July, 1836, to July, 1837.
Luther Mason.
Richard Montague.
Warren Hecox.
Darius Armstrong.
Wm. H. Johnson.
From July, 1835, to July, 1836.
Joseph Williams.

Sheep.

SAXONY and MERINO BUCKS for sale. Inquire at the City Mills, or at Brighton of Porter Taylor.

Rochester, Oct. 10, 1836. oct 15-f3t

Garden Seeds, Trees, &c.

WM. PRINCE & SONS, Proprietors of the Linnæan Garden and Nurseries, near New York, offer to the public the most extensive collection of Garden, Agricultural and Flower Seeds to be found in the Union.

They will supply venders on the most favorable terms, both as to prices and credit, and they will also enter into such engagements relative to Agencies for the sale of their Tress, Plants, Bulbous Roots, &c., as cannot fail to be highly advantageous to their correspondents. The Seeds will be supplied by the pound and bushel at low prices, or they will be furnished to any extent, put up in small papers and labelled ready for retailing, on which a large discount will be allowed. Specimen beds of the different seeds are growing for inspection, whereby their excellence and accuracy are proved. 3000 lbs. Red, Yellow, White, Silver Skinned, and Madeira Onion seed just ready for delivery. 100,000 Chinese Morus Multicaulis at $25 to $30 per hundred. 15,000 Broad-leaved Florence Mulberry at $12 to $15 per hundred, and also above 100,000 White Italian do., at $30 to $80 per thousand according to size. Fruit and Ornamental Trees of every description, Flowering Shrubs, Bulbous Flowering Roots, splendid Double Dahlias, Green House Plants, &c., priced Catalogues of which will be sent per mail to every applicant. The proprietors of Nurseries, and those who wish to establish new Nurseries will be dealt with at a liberal discount.

N. B.—1500 lbs. Finest Early York, Drumhead, savoy, and other Cabbages, (new crop) just received.

Flushing. October 8th, 1836. 3t

Sale of Sheep.

THE subscriber hereby informs the public that his annual sale of BUCKS will commence on the 25th day of Oct. inst. and after continued, at his residence, half way between Mount Morris and Danville.

His flock of Sheep, for purity of blood and quality of wool, has now become so generally known to the principal breeders of sheep in this part of the country, as to preclude the necessity of description and recommendation. They consist of pure blood

Saxony and genuine Merino.

The clip of the entire flock the two preceding shearings, sold for 70 cents per lb. He confidently tenders the assurance of a choice of Bucks, equaling any preceding offer or selection. In addition to which he will offer for sale, in lots to accommodate purchasers, the surplus of his flock, over his estimate of his fodder for the ensuing winter, consisting of Ewes and Lambs to the amount of 200.

FRANCIS MOORE.

Sparta, October 5, 1836.

Chinese Mulberry Trees and Cuttings.

THE best varieties of CHINESE MULBERRY, (Morus Multicaulis) from *France*, *Italy* and *China*, of *one*, *two* and *three* years' growth, may be had in large or small quantities, from S. WHITMARSH'S extensive collection, and forwarded to any part of the United States, according to order, with directions for propagation.

It is confidently believed, that the present mode of culture adopted by us, will prove a certain and secure protection against the severity of winter, and the best method, by which, to increase the foilage and multiply the number of trees.

All orders directed to the subscriber, will receive immediate and faithful attention.

In behalf of S. WHITMARSH.
DANIEL STEBBINS.

Northampton Sept. 7. sept18-7t*

Monroe Horticultural Garden and Nurseries, GREECE, MONROE CO. N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired delivered on the canal one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.

To Farmers, Breeders and Others,

THE subscribers would respectfully inform those pursuing any of the above branches of business, that they have just imported from Holderness, in Yorkshire, the prize bull Cottingham, of the pure improved Short Horn breed, which has been selected with great care from the stock of that well known breeder, Mr. Collins, of Danthorpe, in Holderness. Gentlemen wishing to stock their farms with an improved breed, are requested to make early application, as he will be limited to a certain number of cows this his first season.

COTTINGHAM,

Was bred by Mr. Collins, of Danthorpe, Yorkshire, England,—is of a hazel and white color. He was got by Collins' Invincble, (who has obtained the premium 7 successive years at the Holderness Agricultural Show,) his dam by Jackson's Rainbow, grand-dam by Strickland's Fusileer, great grand-dam by Harding's noted bull the Baronet, who was sold for £640 sterling, to go abroad.

The subscribers have also just imported 2 new Leicester Rams, which sheared last spring thirteen pounds one ounce of wool each, which are for sale or to be let for the season, on reasonable terms.—Applications, if by letter, post paid.

Signed, GEORGE HENTIG,
CHARLES HENTIG.

Grosse Isle, Monquagon, Michigan, Sept. 22, 1836. oct 1-f3t

From the Baltimore Farmer and Gardener.

Hussey's Horse Mowing Machine.

In a former number of our paper we gave an account of the experiment which Mr. *Hussey* made of his machine in this neighborhood, and assigned the reasons, as we understood them, which had induced him to stop his labors. In that article we mentioned that we were informed by that gentleman that his experiments made on the Eastern Shore of this state had been highly satisfactory to the intelligent *Agricultural Board of Talbot County*, and that they would make favorable report thereof, and we are now gratified to be able to give place in another column to their official paper upon the subject, by which we learn, with feelings of unmingled pleasure, that all his experiments in that county gave entire satisfaction, and that to the generous spirit which has ever distinguished the inhabitants of our Eastern peninsula, he is indebted for a "*handsome pair of silver cups*," which trophies he receives as the unanimous expression of the great pleasure which those enlightened and distinguished agriculturists take in rewarding the industrious inventor of a labor-saving machine. So marked a testimonial, from a *board* of agriculturists composed of gentlemen of so much patriotism, so much personal worth, so much intelligence, and so much skill in the art of farming, as is that of *Talbot*, must, indeed, be a source of proud and triumphant satisfaction to Mr. Hussey, and we trust that it will serve to arouse a spirit in his favor that will not only compensate him for his inventive genius, but lay the ground work for a fame which will hand his name down to posterity as among those mechanical benefactors, who have contributed to build up for America a name as durable as is our inexhaustible beds of granite.

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Hussey's Grain Cutter.

Report of the Board of Trustees of the Maryland Agricultural Society for the Eastern Shore, on the machine for harvesting small grain, invented by Mr. Obed Hussey, of Cincinnati, Ohio.

The favorable accounts of the operation of this implement in several of the Western States, induced the Board to invite Mr. Hussey to bring it to Maryland and submit it to their inspection. It was accordingly exhibited in Oxford, Talbot co., on the first of July, in presence of the Board and a considerable number of other gentlemen. Its performance may justly be denominated perfect, as it cuts every spear of grain, collects it in bunches of the proper size for sheaves, and lays it straight and even for the binders. On the 12th of July a public exhibition was made at Easton, under the direction of the Board—several hundred persons, principally farmers, assembled to witness it, and expressed themselves highly satisfied with the result. At the Trappe where it was shown by the Inventor on the following Saturday an equal degree of approbation was evinced. It was afterwards used on the farm of Mr. Tench Tilghman, where 180 acres of wheat, oats and barley were cut with it. Three mules of medium size worked in it constantly, with as much ease as in a drag harrow. They moved with equal facility in a walk or a trot. A concise description of this simple implement will show that it is admirably adapted to the important purpose for which it was invented. Resting on two wheels which are permanently attached to the machine and impart the motion to the whole, the main body of the machine is drawn by the horses along the outer edge of the standing grain. As the horses travel outside of the grain it is neither knocked down or tangled in the slightest degree. Behind the wheels is a platform (supported by a roller or wheel) which projects beyond the side of the machine, 5 feet into the grain. On the front of the edge projecting part of the platform is the cutter. This is composed of 21 teeth, resembling large lancet blades, which are placed side by side, and firmly rivetted to a rod of iron. A lateral motion is imparted to it by a crank, causing it to vibrate between two rows of iron spikes which point forward. As the machine advances the grain is cut and falls backwards on the platform, where it collects in a pile. A man is placed on the part of the platform directly behind the machine, and with a rake of peculiar construction, pushes off the grain in separate bunches, each bunch making a sheaf. It may appear to some that the grain will accumulate too rapidly for this man to perform his duty. But upon considering the difference between the space occupied by the grain when standing and when lying in a pile after it is cut, it will be evident that the raker has ample time to bush off the bunches even in the thickest grain. In thin grain he has to wait until sufficient has collected to form a sheaf.

The machine is driven around the grain which may be sown either on a smooth surface or on corn ridges. For the first round a way may be cleared with a cradle; but this is deemed unnecessary; for the grain, when driven over, is left in an inclined position, and by cutting it in the opposite direction as much of it is saved as with a cradle. Fourteen acres in corn lands were cut between 10 A. M. and 7 1-2 P. M. The hands had never worked with the machine before, nor was it a day's work. For owing to the shortness of the straw, the machine was not allowed to cut when passing over the ridges from one side of the ground to the other, and this time was consequently lost. From the principle on which the cutting is performed, a keen edge to the cutter is by no means essential. The toughest weeds, an occasional corn stalk, or a stick of the thickness of a man's little finger, have been frequently cut without at all affecting its operation; it can be sharpened, however, in a few minutes with a file. The width of the swath may be increased by having the cutter made longer, and the same machine will cut a stubble of several different heights.

There is ample room to make the different parts of any size, though the strength of every part has been fully tested. The machine has been often choked by oyster-shells getting into the cutter, in attempting to cut too low a stubble. The motion of the machinery being checked, the main wheels slide on the ground, the strain on every part being equal to the power exerted by the horses. It can be managed by any intelligent, careful negro. We deem it a simple, strong, and effective machin, and take great pleasure in awarding, unanimously, the meritorious inventor of it a handsome pair of silver cups.

Robt. H. Goldsborough,	Ed. N. Hambleton,
Samuel Stevens,	J. L. Chamberlain,
Samuel T. Kennard,	Martin Goldsborough,
Robert T. Banning,	Hora. L. Edmondson,
Samuel Hambleton, Sr.	Tench Tilghman.
Nichl. Goldsborough,	

Chinese Mulberry.

1. What is the time for removing seedlings to the cellar, and would you advise taking in both Chinese and White?

2. With respect to the plants, the growth of this year from roots, ought they to be removed; or, if not, what is the way you would guard them from the winter frosts?

3. In taking off cuttings, would you cut them from plants of the first year's growth from seed, and what is the right time for taking them?

4. How do you keep cuttings during the winter?

Answers by the Editor.—1st and 2d. The time of taking up seedlings must depend upon the state of the weather, care being had that they are removed before the frosts are severe enough to destroy them. Our advice would be to secure the Chinese in season, and let the White remain protected by throwing horse and other coarse manure upon them, in the manner proposed in answer to the same inquiry by a Virginia correspondent in another column.

3d and 4th. Cuttings should be taken from the last year's growth, the wood of the previous year, however answers well for that part of the cutting which is below the surface of the ground. They should not be taken from the tree until spring, unless they are to be sent off in the fall—in that case they should be covered with earth or moss to prevent their drying up. When they are to be sent a considerable distance they should be packed in boxes.

1. Do you think it advisable to water the shoots after they are laid down, or the cuttings—if so, how often, and what time of day?

2. Will it be best to take up the old roots with the layers in the autumn and at what time? How late will it answer to lay down shoots? Will it be prudent to feed the next season from the trees which I shall probably have from my 100 Chinese trees set out the present season?

Answers by the Editor.—1. Keeping the earth moist has a tendency to cause layers and cuttings to strike roots more readily and also forces them to throw up shoots more rapidly of a more thrifty growth. Watering in seasons of drought is indispensable to the growth of layers and cuttings, and may be to their life—at any rate it should not be neglected. In all our attempts to aid nature in her works, we should as far as possible, conform to her laws, and be careful not to frustrate her economy. In promoting the growth of plants she gives them alternate seasons of rain and sunshine—but when she bestows the former she invariably withholds the latter—and in this we should be careful to imitate her example. Plants and trees of all kinds should be watered before the rising of the sun, or after its setting or it may prove injurious rather than beneficial. Rain or running water is the best for this purpose; but, if it cannot be procured, well water, after being exposed to the sun several hours, will answer. The frequency of watering depends entirely on the dryness of the weather, of which, the cultivator, for the time being, will be the most competent judge. He should, however, always remember to keep the earth moist. Shading them from the direct rays of the sun will also have a tendency to make them live, as well as promote their growth.

2. We have plants of the Morus multicaulis which endured the last two severe winters; but as they are of great value, and as every cultivator is desirous to multiply them as fast as possible, we should advise their removal to the cellar, before the hard frosts of autumn. Layers ought not to be laid down later than the first or middle of July, if good trees are intended to be propagated. The foilage of the Morus multicaulis may be plucked the first year without injury to the tree.—*Silk Culturist.*

25,000 Mulberry Trees.

WE have 25,000 White Italian Mulberry Trees 3 years old, which we will sell at $25 per 1000, or $3 per 100. If 5000 or upwards are taken, a deduction will be made.

REYNOLDS & BATEHAM,
sept 3 Rochester Seed Store.

20,000 GENUINE Morus multicaulis, or Chinese Mulberry, of one and two years' growth, by the dozen, hundred or thousand.

Also—30,000 White *Mulberry*, of one and two years' growth—for sale by ASA ROWE.

ELECTION NOTICE.—*Sheriff's Office, Monroe County, Rochester, July* 23, 1836.—A general election is to be held in the county of Monroe, on the 7th, 8th and 9th days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed. ELIAS POND, Sheriff.

State of New-York, Secretary's Office, Albany, July 15, 1836.

Sir—I hereby give you notice that at the next general election of this state, to be held on the 7th 8th and 9th days of November next, a Governor and Lieutenant Governor are to be elected.

I also give you notice that a Senator is to be chosen in the Eighth Senate District in the place of John Griffin, whose term of office will expire on the last day of December next.

JOHN A. DIX, Secretary of State.

To the Sheriff of the county of Monroe.

N. B.—The Inspectors of Election in the several towns in your county will give notice of the election of a Representative to Congress from the 28th Congressional District, and that 42 Electors of President and Vice President are also to be chosen at the general election aforesaid. They will also give notice of the election of Members of Assembly, and for filling any vacancies in county offices which may exist. july26